

Fig. 1

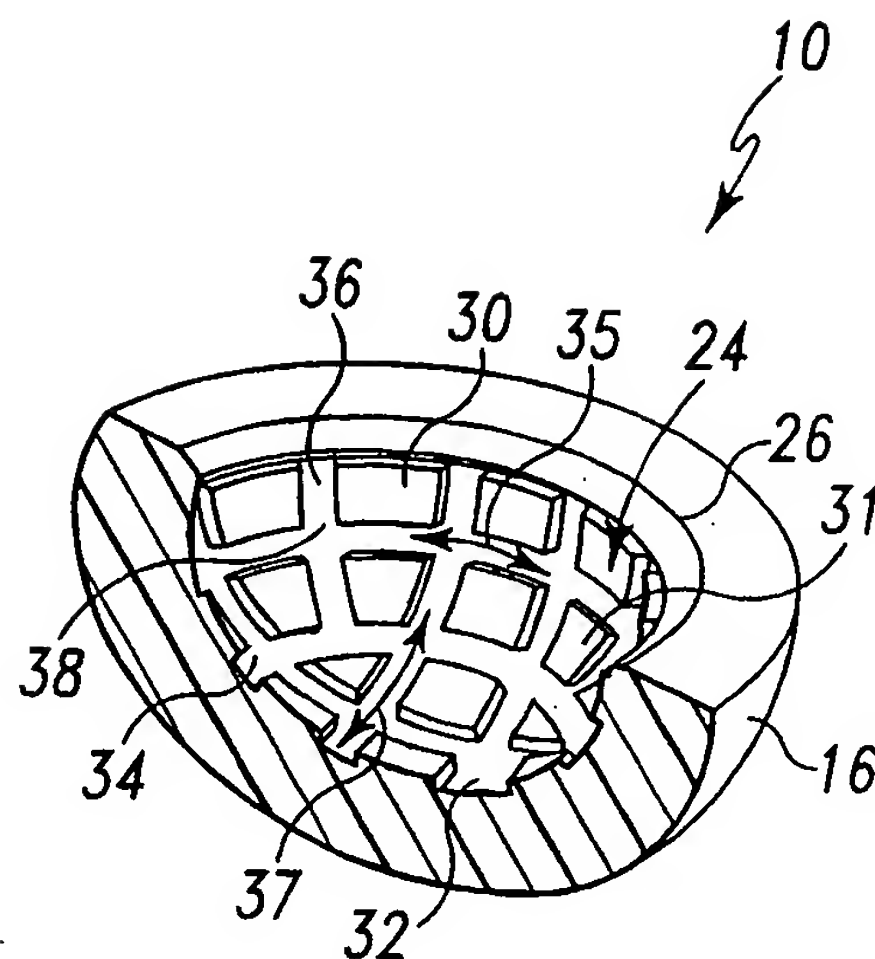


Fig. 2

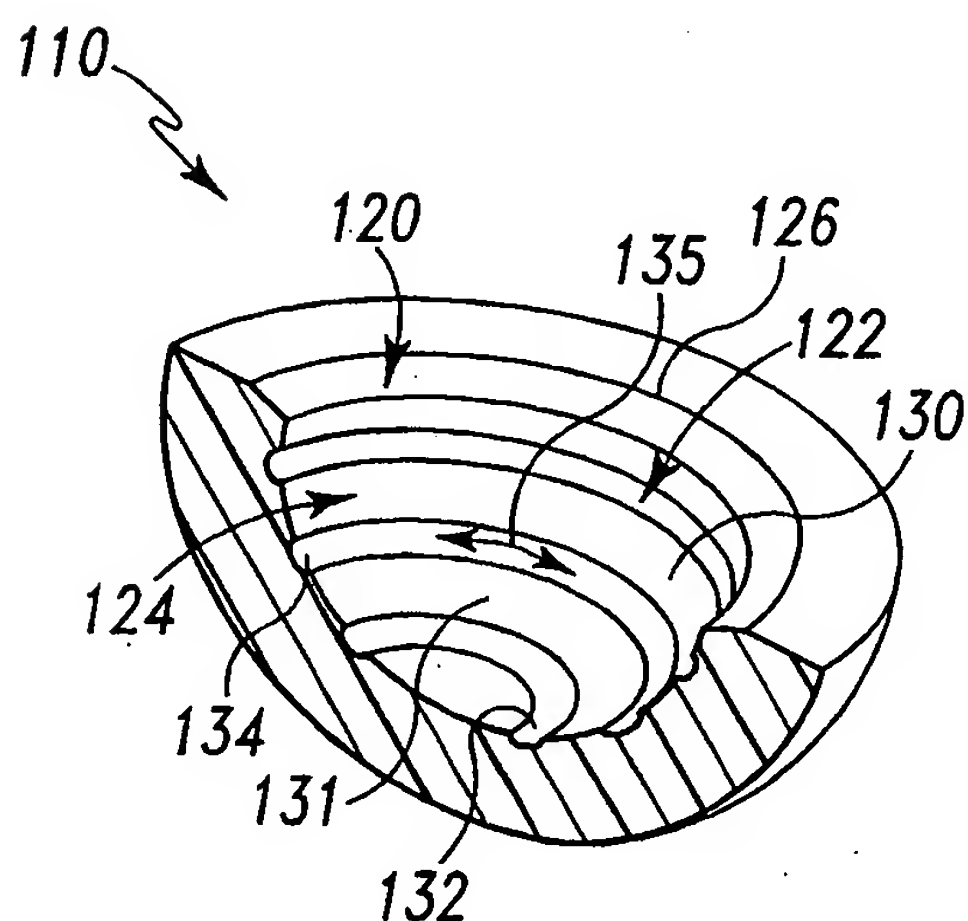


Fig. 3

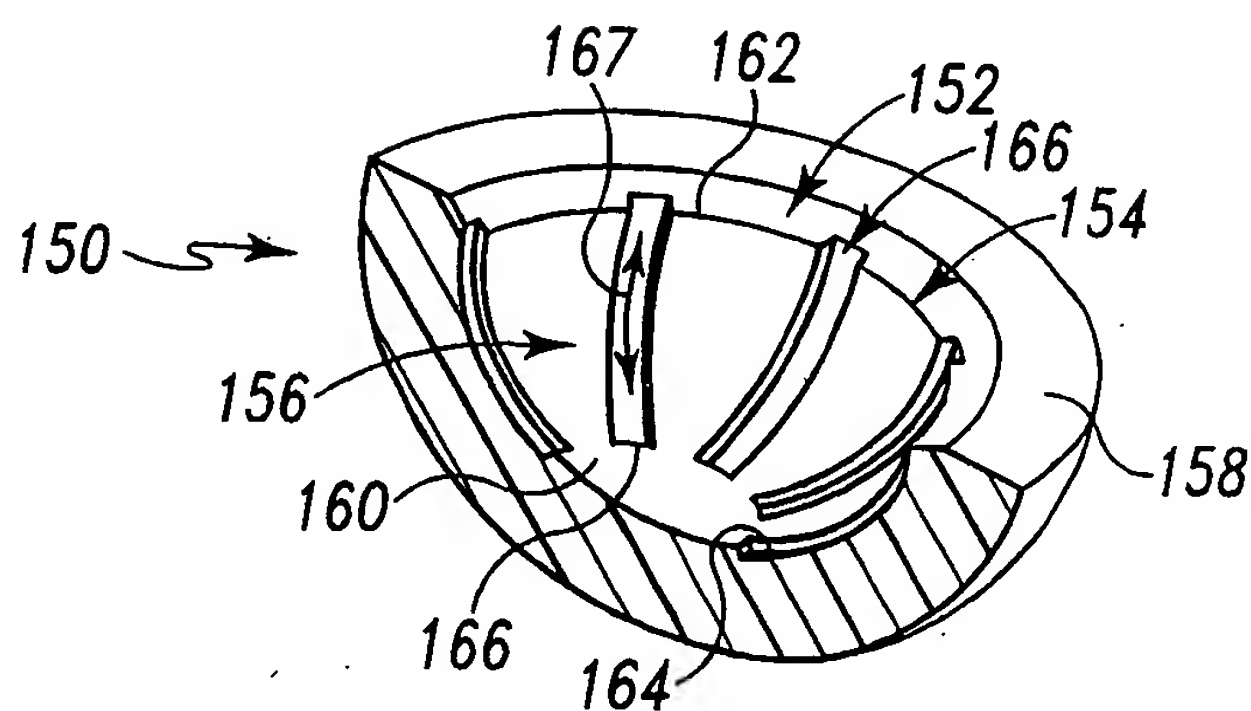


Fig. 4

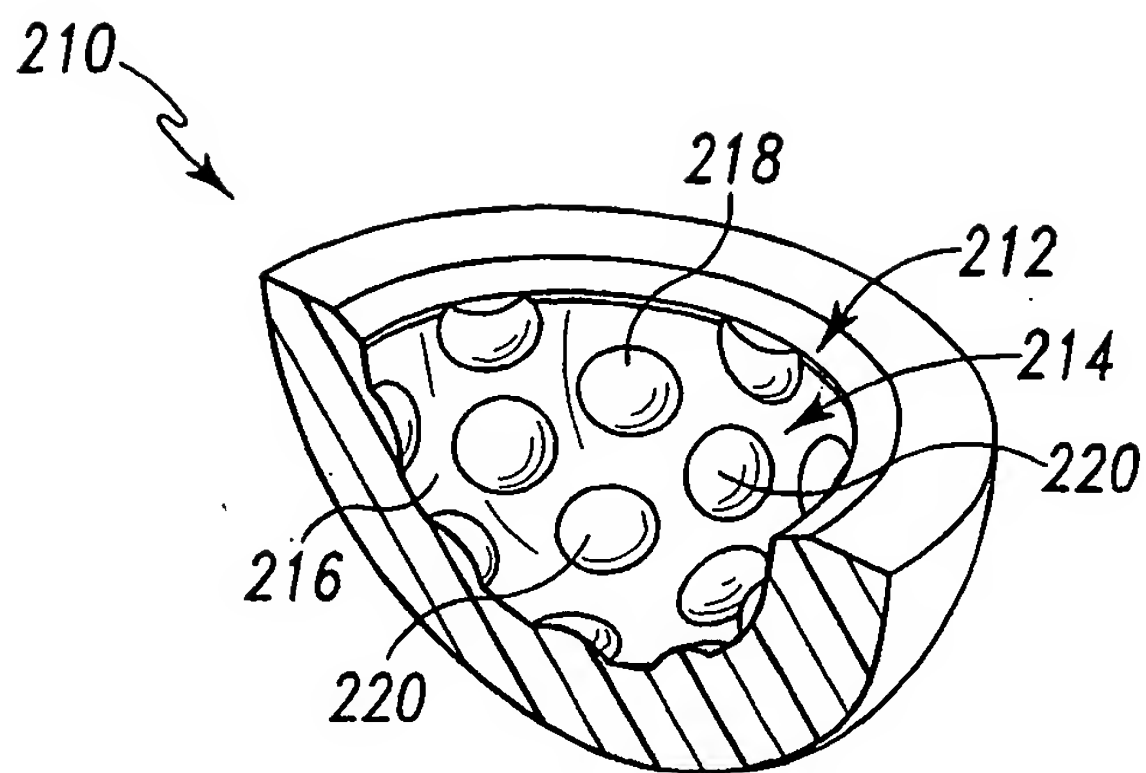


Fig. 5

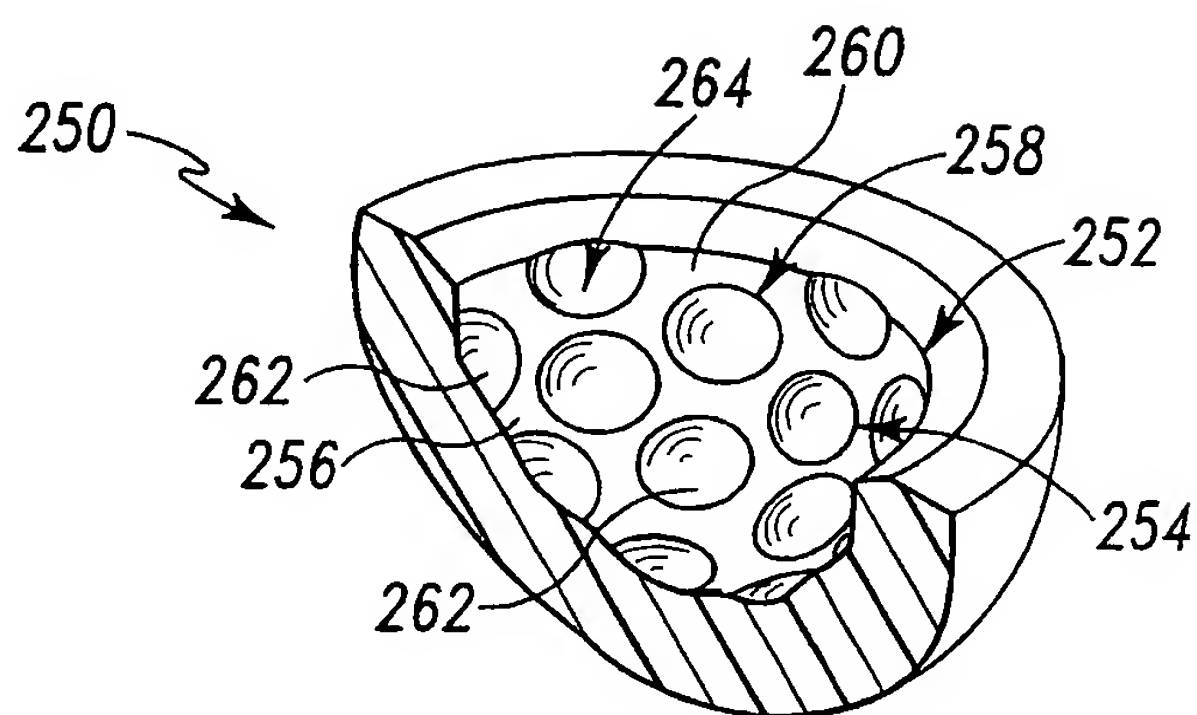


Fig. 6

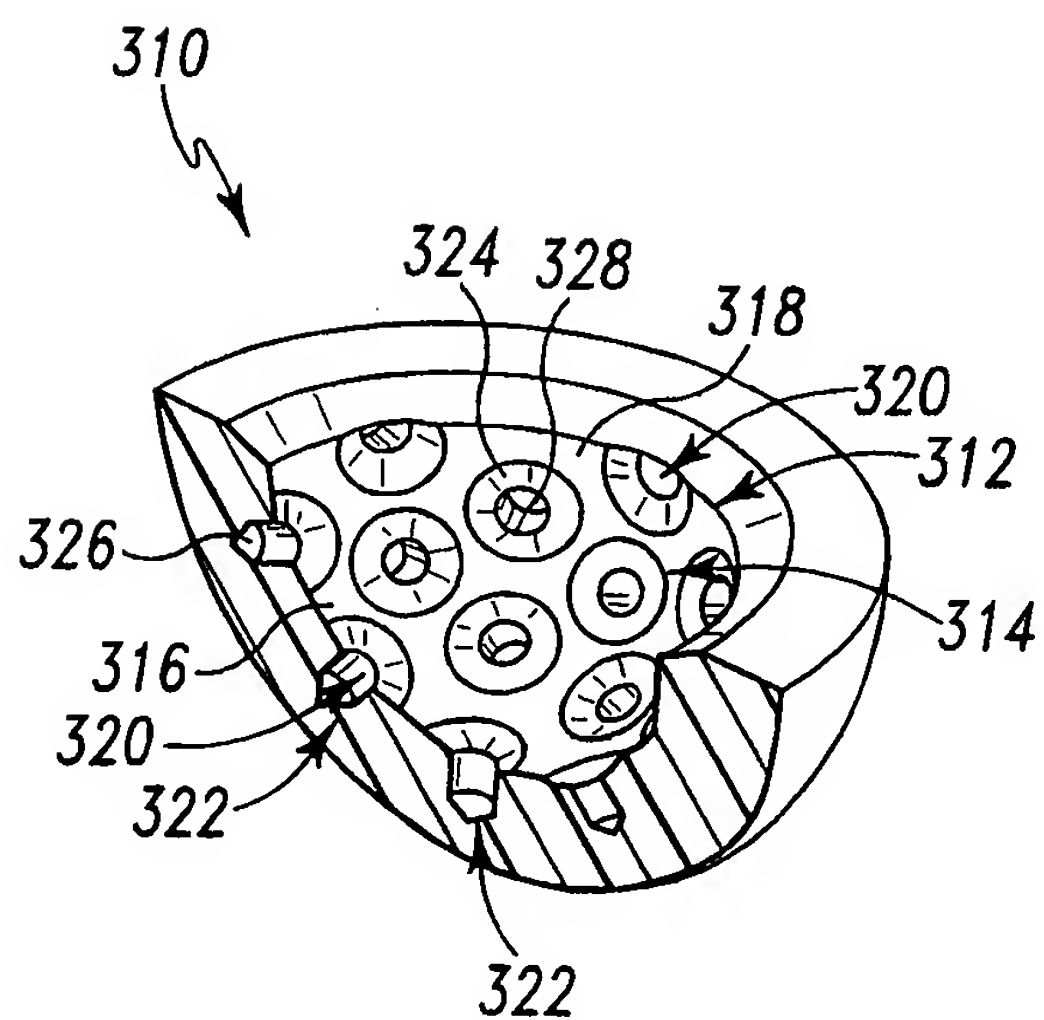


Fig. 7

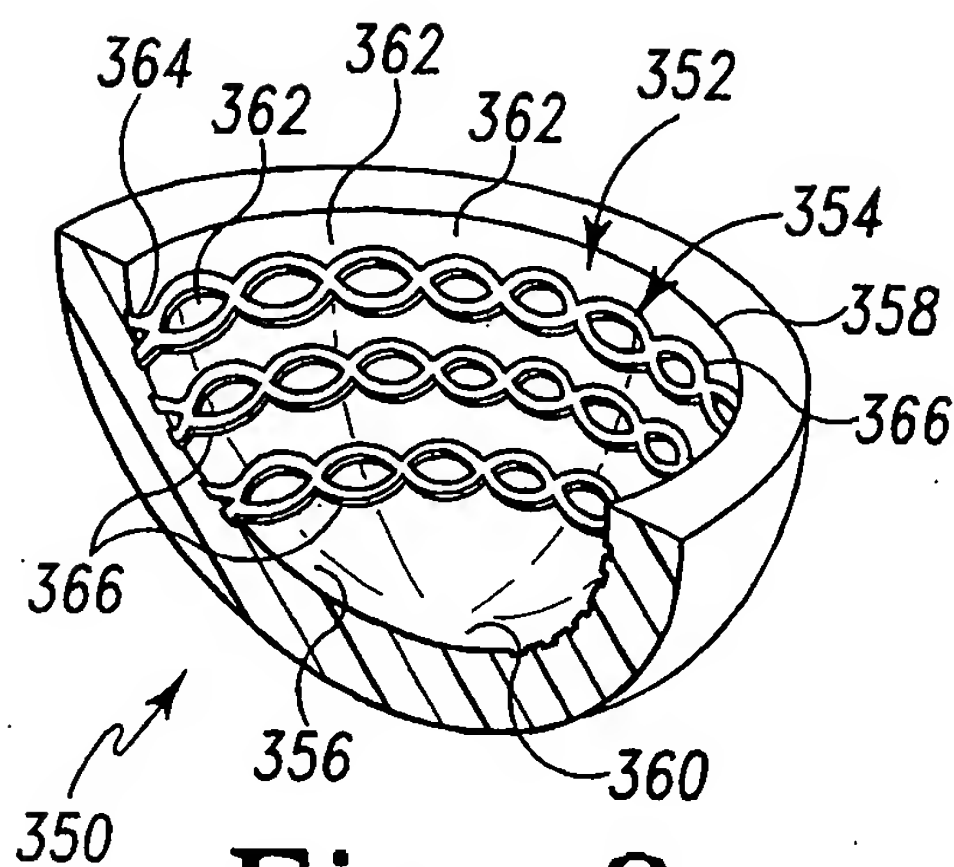


Fig. 8

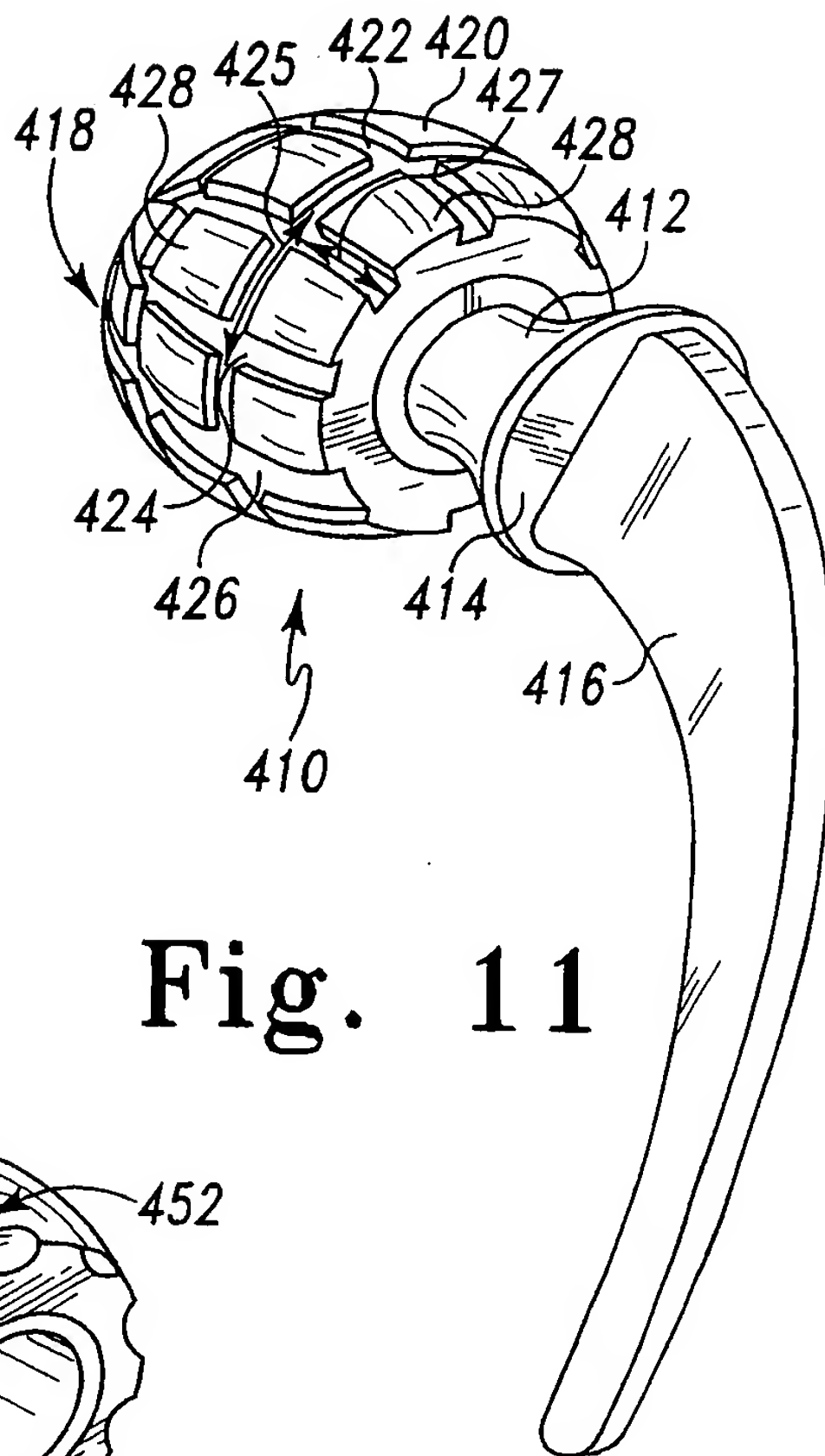


Fig. 11

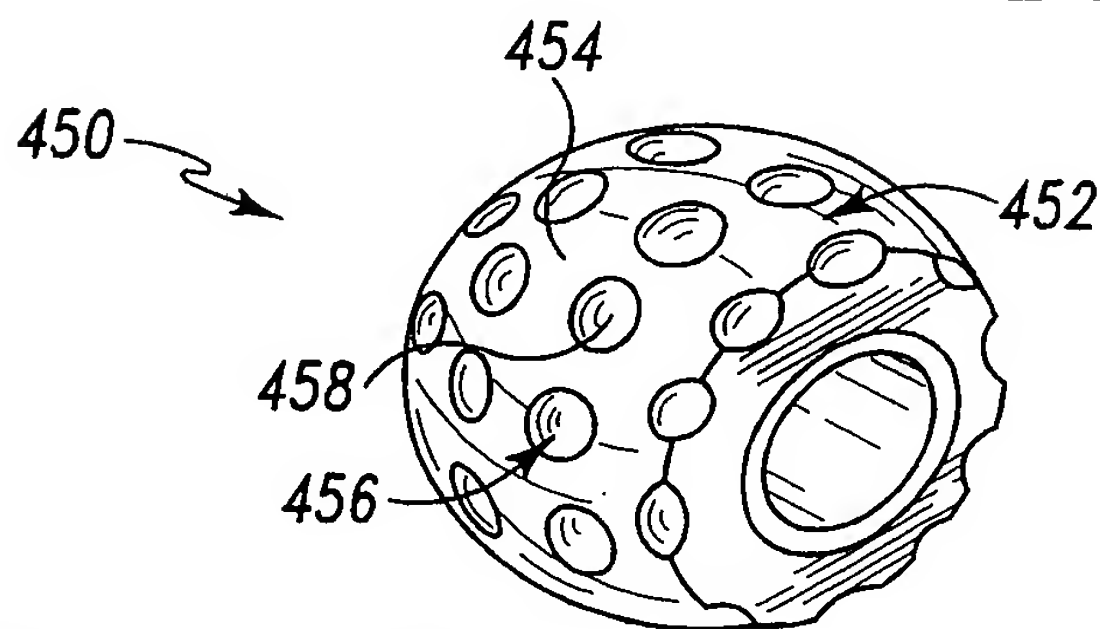


Fig. 12

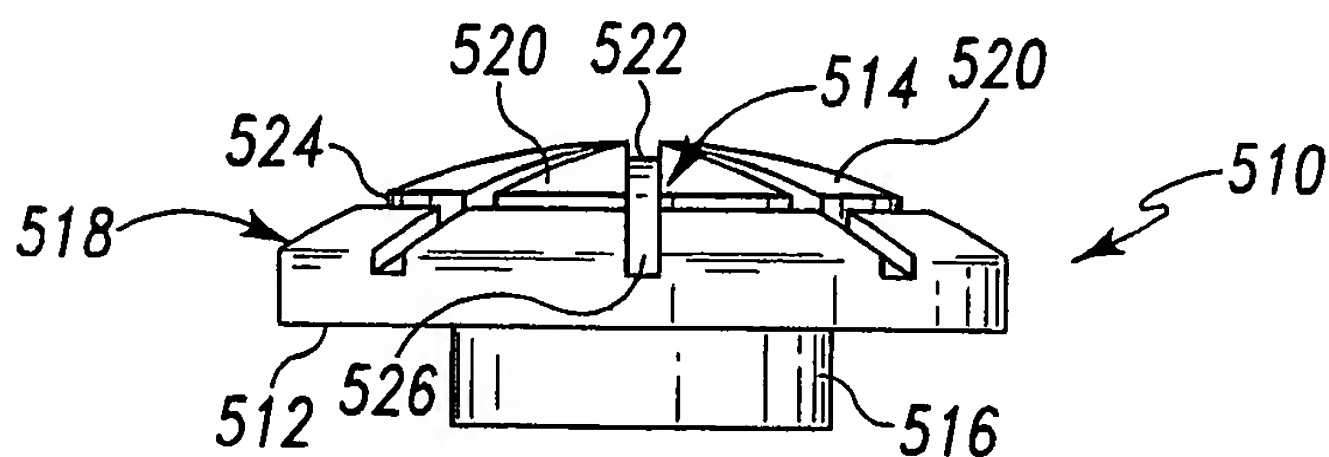


Fig. 13

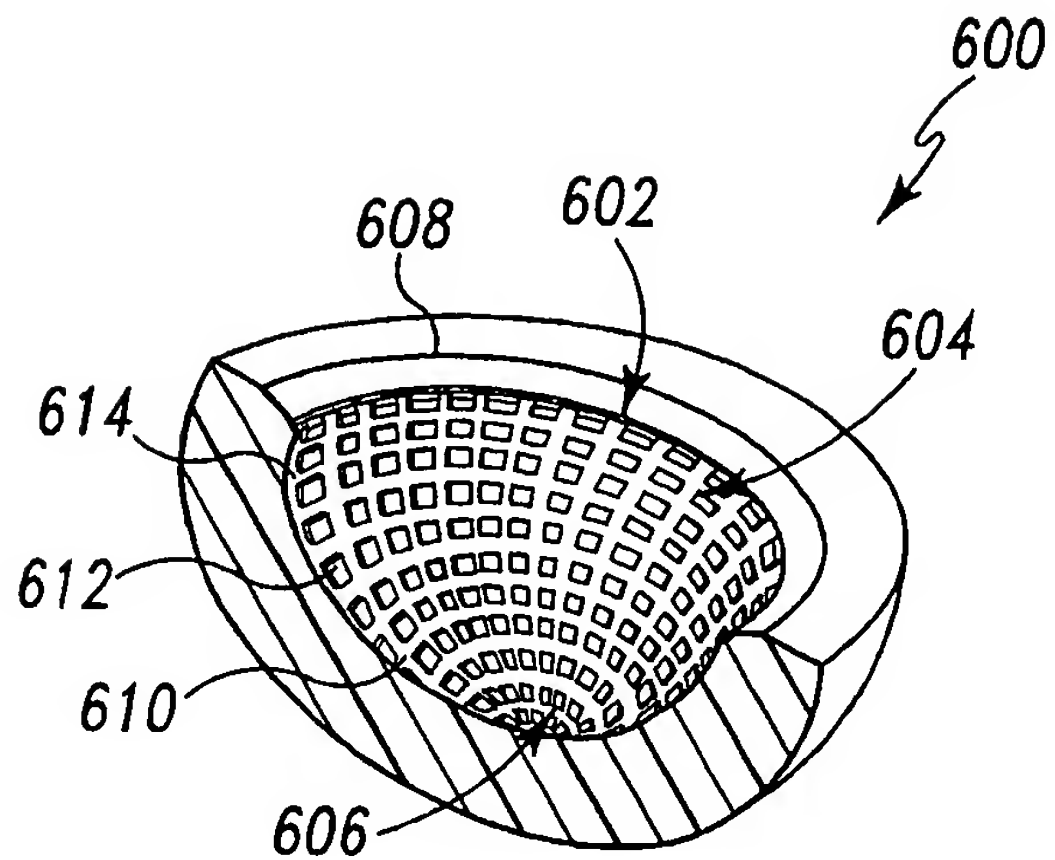


Fig. 9

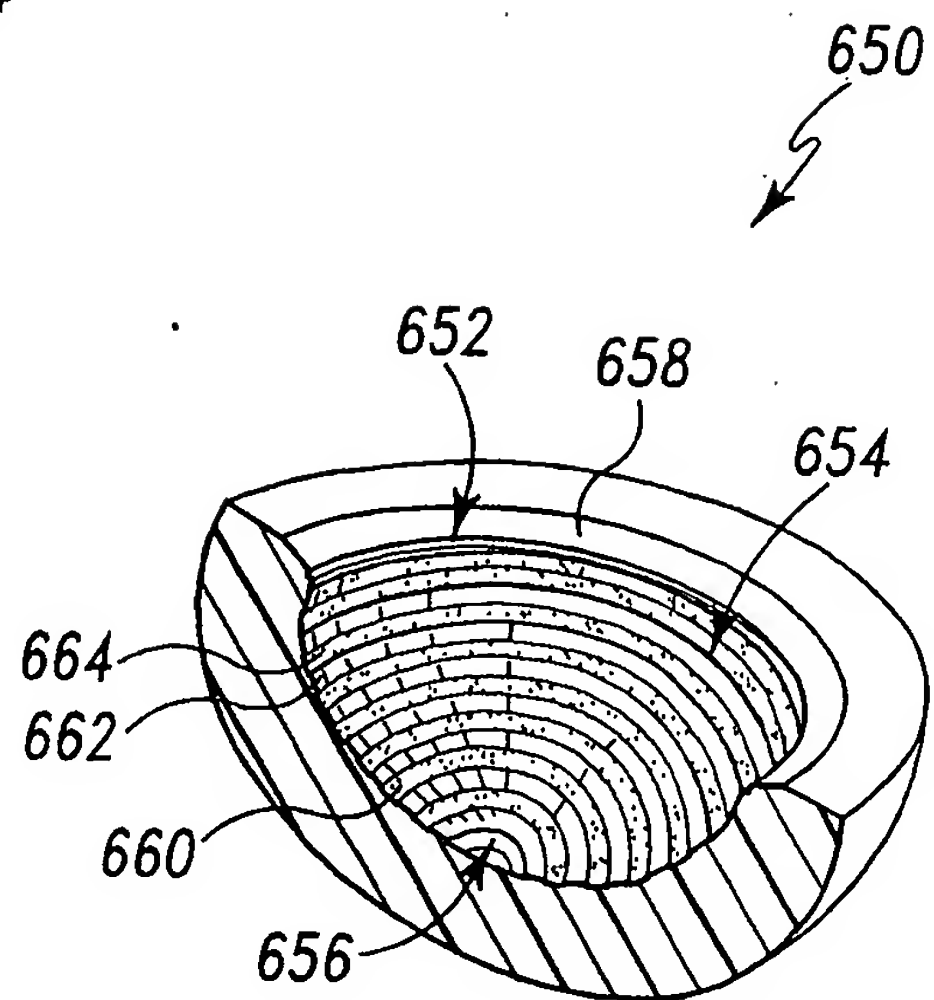


Fig. 10

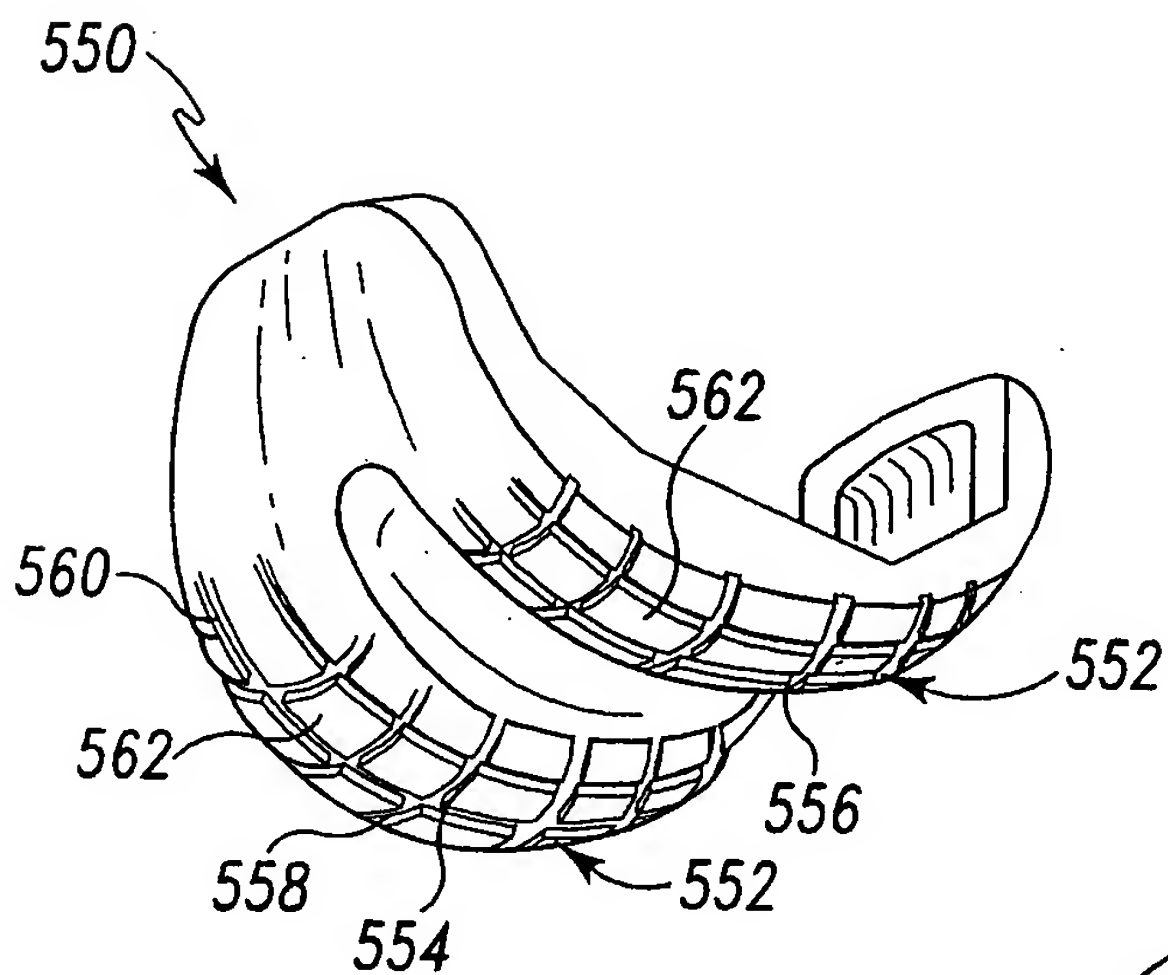


Fig. 14

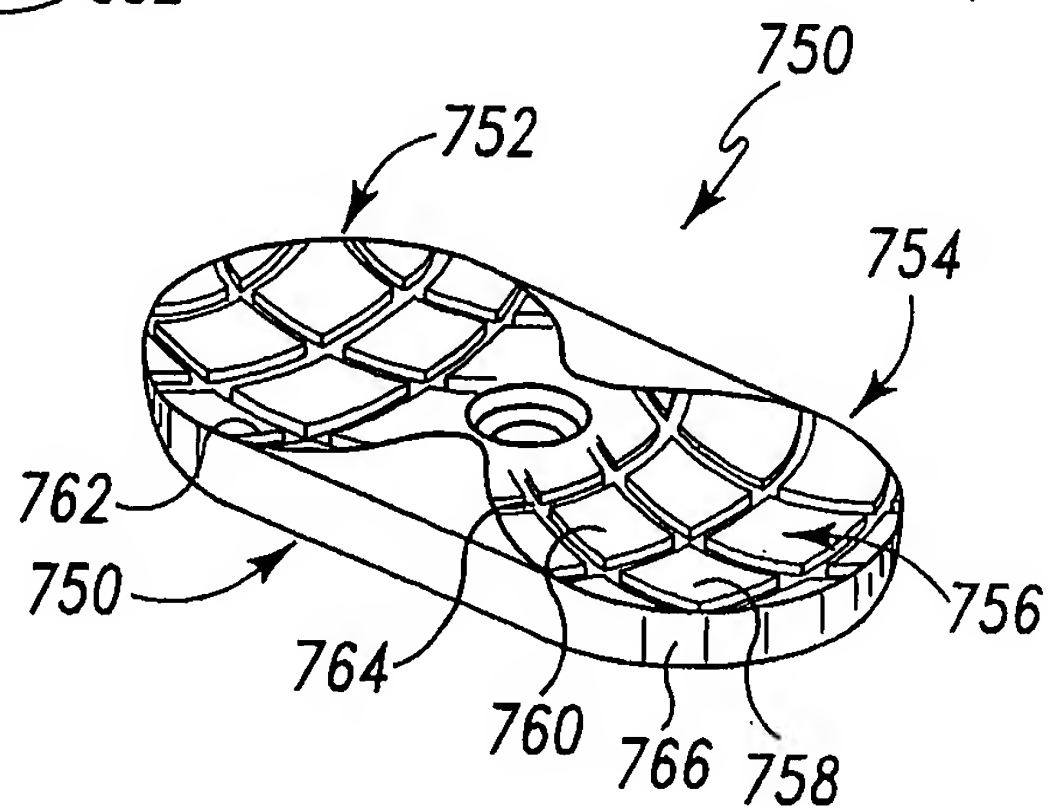


Fig. 15

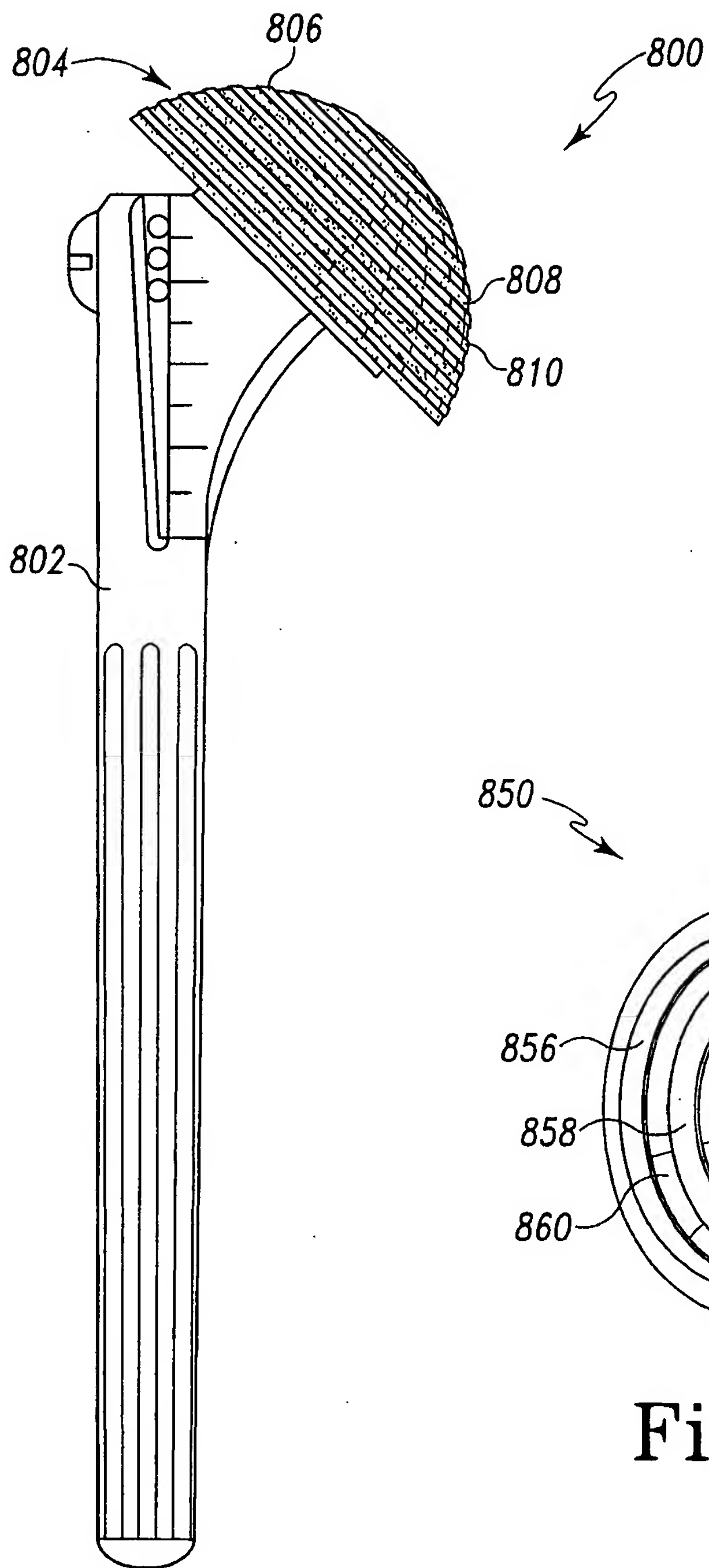


Fig. 16

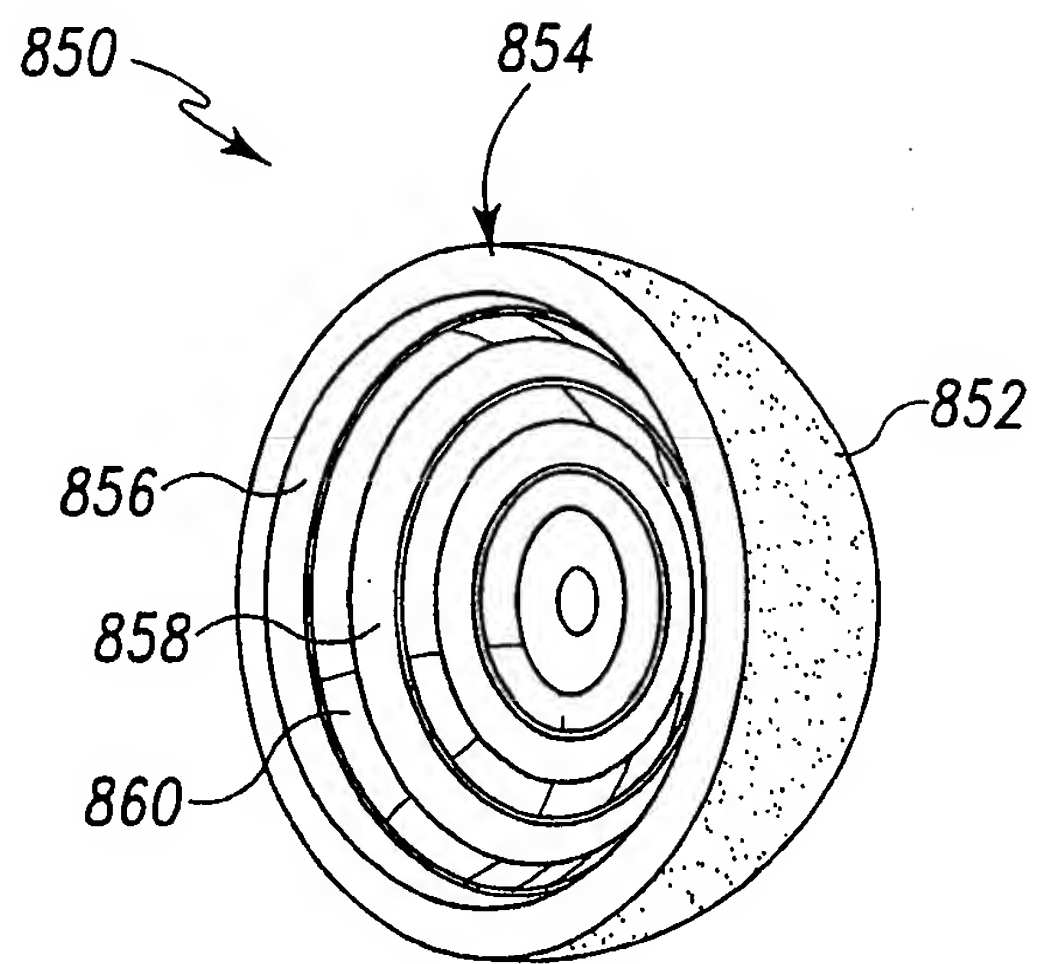


Fig. 17

COBALT CHROMIUM ON COBALT CHROMIUM

Ø NOMINAL (mm)	40 µm			60 µm			80 µm			100 µm			120 µm		
	AREA (mm ²)	% AREA OF RELIEF (OF UNINTERRUPTED CONTACT AREA)	% AREA OF RELIEF (OF TOTAL ARTICULAR SURFACE AREA)	AREA (mm ²)	% AREA OF RELIEF (OF UNINTERRUPTED CONTACT AREA)	% AREA OF RELIEF (OF TOTAL ARTICULAR SURFACE AREA)	AREA (mm ²)	% AREA OF RELIEF (OF UNINTERRUPTED CONTACT AREA)	% AREA OF RELIEF (OF TOTAL ARTICULAR SURFACE AREA)	AREA (mm ²)	% AREA OF RELIEF (OF UNINTERRUPTED CONTACT AREA)	% AREA OF RELIEF (OF TOTAL ARTICULAR SURFACE AREA)	AREA (mm ²)	% AREA OF RELIEF (OF UNINTERRUPTED CONTACT AREA)	% AREA OF RELIEF (OF TOTAL ARTICULAR SURFACE AREA)
22	59.65	0.0	0.0	45.55			37.62			32.44			28.74		
23	63.29	5.7	0.44	48.32			39.91			34.42			30.49		
24	66.98	10.9	0.81	51.14			42.24			36.42			32.27		
25	70.72	15.7	1.13	54.00			44.60			38.45			34.07		
26	74.51	20.0	1.40	56.89			46.99			40.15			35.90		
27	78.36	23.9	1.63	59.83	0.3	0.02	49.41			42.60			37.74		
28	82.25	27.5	1.84	62.80	5.0	0.26	51.86			44.71			39.62		
29	86.18	30.8	2.01	65.80	9.4	0.47	54.34			46.85			41.51		
30	90.17	33.8	2.16	68.84	13.4	0.65	56.85			49.02			43.42		
31	94.19	36.7	2.29	71.91	17.1	0.81	59.39			51.20			45.36		
32	98.26	39.3	2.40	75.02	20.5	0.96	61.95	3.7	0.14	53.41			47.32		
33	102.38	41.7	2.50	78.16	23.7	1.08	64.55	7.6	0.29	55.65			49.30		
34	106.53	44.0	2.58	81.33	26.7	1.19	67.16	11.2	0.41	57.90			51.30		
35	110.73	46.1	2.65	84.53	29.4	1.29	69.81	14.6	0.53	60.18			53.31		
36	114.96	48.1	2.72	87.77	32.0	1.38	72.48	17.7	0.63	62.48	0.9	0.03	55.35		
37	119.24	50.0	2.77	91.03	34.5	1.46	75.17	20.6	0.72	64.80	8.0	0.24	57.41		
38	123.55	51.7	2.82	94.32	36.8	1.53	77.89	23.4	0.80	67.14	11.2	0.33	59.48		
39	127.90	53.4	2.86	97.64	38.9	1.59	80.63	26.0	0.88	69.51	14.2	0.41	61.57		
40	132.29	54.9	2.89	100.99	40.9	1.65	83.39	28.5	0.94	71.89	17.0	0.49	63.68		
41	136.72	56.4	2.92	104.37	42.9	1.69	86.18	30.8	1.00	74.29	19.7	0.55	65.81		
42	141.18	57.8	2.94	107.77	44.7	1.74	88.99	33.0	1.06	76.72	22.3	0.62	67.96		
43	145.68	59.1	2.96	111.21	46.4	1.78	91.83	35.0	1.11	79.16	24.6	0.67	70.12		
44	150.21	60.3	2.98	114.67	48.0	1.81	94.68	37.0	1.15	81.62	26.9	0.72	72.30		
45	154.78	61.5	2.99	118.15	49.5	1.84	97.56	38.9	1.19	84.10	29.1	0.77	74.50		
46	159.38	62.6	3.00	121.66	51.0	1.87	100.46	40.6	1.23	86.60	31.1	0.81	76.71		
47	164.01	63.6	3.01	125.20	52.4	1.89	103.38	42.3	1.26	89.12	33.1	0.85	78.94		
48	168.68	64.6	3.01	128.76	53.7	1.91	106.32	43.9	1.29	91.65	34.9	0.88	81.18		
49	173.38	65.6	3.02	132.35	54.9	1.93	109.28	45.4	1.32	94.20	36.7	0.92	83.44		
50	178.11	66.5	3.02	135.96	56.1	1.94	112.26	46.9	1.34	96.77	38.4	0.95	85.72		
51	182.87	67.4	3.02	139.60	57.3	1.96	115.26	48.3	1.36	99.36	40.0	0.97	88.01		
52	187.67	68.2	3.01	143.25	58.4	1.97	118.28	49.6	1.38	101.96	41.5	1.00	90.31		
53	192.49	69.0	3.01	146.94	59.4	1.98	121.32	50.8	1.40	104.58	43.0	1.02	92.63		
54	197.35	69.8	3.01	150.64	60.4	1.99	124.38	52.0	1.41	107.22	44.4	1.04	94.97		
55	202.24	70.5	3.00	154.37	61.4	1.99	127.46	53.2	1.43	109.87	45.7	1.06	97.32		
56	207.15	71.2	2.99	158.12	62.3	2.00	130.56	54.3	1.44	112.54	47.0	1.07	99.68		
57	212.10	71.9	2.99	161.90	63.2	2.00	133.68	55.4	1.45	115.22	48.2	1.09	102.06		
58	217.07	72.5	2.98	165.69	64.0	2.01	136.81	56.4	1.46	117.93	49.4	1.10	104.45		
59	222.07	73.1	2.97	169.51	64.8	2.01	139.96	57.4	1.47	120.64	50.6	1.12	106.86		
60	227.11	73.7	2.96	173.35	65.6	2.01	143.13	58.3	1.48	123.37	51.7	1.13	109.28		

BASELINE CONTACT AREA
 MINIMUM % AREA OF RELIEF (COMPARED WITH UNINTERRUPTED BEARING SURFACE)
 MINIMUM % AREA OF RELIEF (COMPARED WITH TOTAL ARTICULAR SURFACE)
 MAXIMUM % AREA OF RELIEF (COMPARED WITH UNINTERRUPTED BEARING SURFACE)
 MAXIMUM % AREA OF RELIEF (COMPARED WITH TOTAL ARTICULAR SURFACE)

Fig. 18

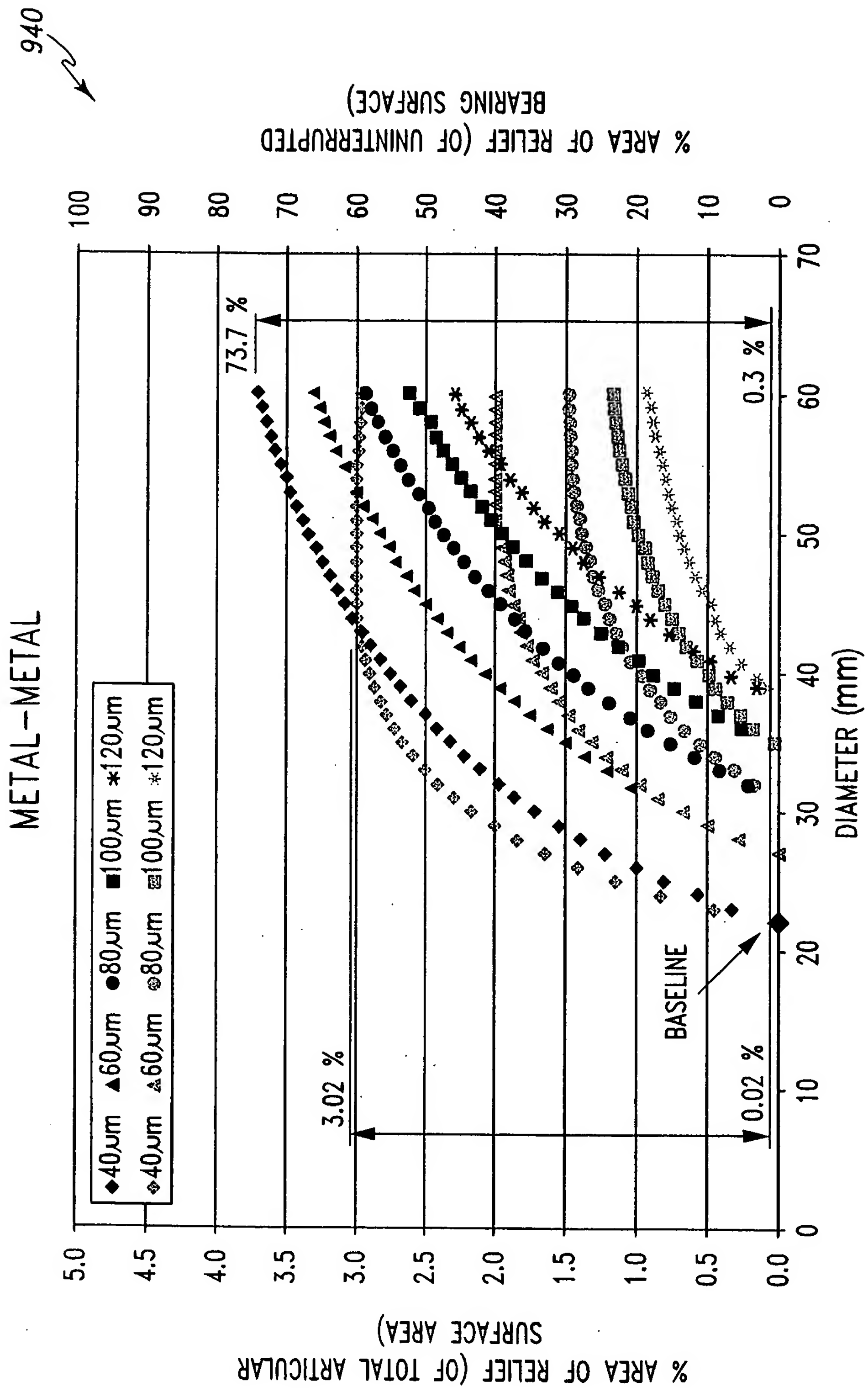


Fig. 19

CERAMIC ON CERAMIC

ϕ NOMINAL (mm)	40 μ m			60 μ m			80 μ m			100 μ m			120 μ m		
	AREA (mm ²)	% AREA OF RELIEF (OF UNINTERRUPTED CONTACT AREA)	% AREA OF RELIEF (OF TOTAL ARTICULAR SURFACE AREA)	AREA (mm ²)	% AREA OF RELIEF (OF UNINTERRUPTED CONTACT AREA)	% AREA OF RELIEF (OF TOTAL ARTICULAR SURFACE AREA)	AREA (mm ²)	% AREA OF RELIEF (OF UNINTERRUPTED CONTACT AREA)	% AREA OF RELIEF (OF TOTAL ARTICULAR SURFACE AREA)	AREA (mm ²)	% AREA OF RELIEF (OF UNINTERRUPTED CONTACT AREA)	% AREA OF RELIEF (OF TOTAL ARTICULAR SURFACE AREA)	AREA (mm ²)	% AREA OF RELIEF (OF UNINTERRUPTED CONTACT AREA)	% AREA OF RELIEF (OF TOTAL ARTICULAR SURFACE AREA)
22	42.43	0.0	0.00	32.40			26.76			23.08			20.45		
23	45.02	5.7	0.31	34.38			28.39			24.48			21.69		
24	47.65	10.9	0.58	36.38			30.05			25.91			22.96		
25	50.31	15.7	0.80	38.41			31.73			27.36			24.24		
26	53.01	20.0	1.00	40.47			33.43			28.82			25.54		
27	55.74	23.9	1.16	42.56	0.3	0.01	35.15			30.31			26.85		
28	59.51	27.5	1.31	44.67	5.0	0.18	36.89			31.81			28.18		
29	61.31	30.8	1.45	46.81	9.4	0.33	38.66			33.33			29.53		
30	64.14	33.8	1.54	48.97	13.4	0.46	40.44			34.87			30.89		
31	67.01	36.7	1.63	51.16	17.1	0.58	42.25			36.42			32.27		
32	69.90	39.3	1.71	53.37	20.5	0.68	44.07			38.00			33.66		
33	72.83	41.7	1.78	55.60	23.7	0.77	45.92		0.10	39.59			35.07		
34	75.78	44.0	1.84	57.86	26.7	0.85	47.78		0.20	41.19			36.49		
35	78.77	46.1	1.89	60.13	29.4	0.92	49.66		0.29	42.81			37.93		
36	81.78	48.1	1.93	62.43	32.0	0.98	51.56		0.38	44.45		0.02	39.37		
37	84.82	50.0	1.97	64.76	34.5	1.04	53.47		0.45	46.10		0.10	40.84		
38	87.89	51.7	2.00	67.10	36.8	1.09	55.41		0.51	47.77		0.17	42.31		
39	90.99	53.4	2.03	69.46	38.9	1.13	57.36		0.57	49.45		0.24	43.80		
40	94.11	54.9	2.06	71.84	40.9	1.17	59.33		0.62	51.14		0.29	45.30		0.01
41	97.26	56.4	2.08	74.25	42.9	1.20	61.31		0.67	52.85		0.35	46.82		0.07
42	100.43	57.8	2.09	76.67	44.7	1.24	63.31		0.71	54.58		0.39	48.34		0.12
43	103.63	59.1	2.11	79.11	46.4	1.26	65.32		0.75	56.31		0.44	49.88		0.17
44	106.86	60.3	2.12	81.57	48.0	1.29	67.36		0.79	58.06		0.48	51.43		0.21
45	110.10	61.5	2.13	84.05	49.5	1.31	69.40		0.82	59.83		0.51	53.00		0.25
46	113.38	62.6	2.13	86.55	51.0	1.33	71.46		0.85	61.60		0.55	54.57		0.29
47	116.67	63.6	2.14	89.06	52.4	1.34	73.54		0.87	63.39		0.58	56.15		0.32
48	119.99	64.6	2.14	91.60	53.7	1.36	75.63		0.90	65.20		0.60	57.75		0.35
49	123.34	65.6	2.15	94.15	54.9	1.37	77.74		0.92	67.01		0.63	59.36		0.38
50	126.70	66.5	2.15	96.72	56.1	1.38	79.86		0.94	68.84		0.65	60.98		0.41
51	130.09	67.4	2.15	99.31	57.3	1.39	82.00		0.95	70.68		0.67	62.61		0.43
52	133.50	68.2	2.14	101.91	58.4	1.40	84.15		0.97	72.53		0.69	64.25		0.45
53	136.94	69.0	2.14	104.53	59.4	1.41	86.31		0.98	74.40		0.71	65.90		0.47
54	140.39	69.8	2.14	107.16	60.4	1.41	88.48		0.99	76.27		0.72	67.56		0.49
55	143.87	70.5	2.13	109.82	61.4	1.42	90.67		1.01	78.16		0.74	69.23		0.51
56	147.36	71.2	2.13	112.49	62.3	1.42	92.88		1.02	80.06		0.75	70.91		0.53
57	150.88	71.9	2.13	115.17	63.2	1.43	95.09		1.02	81.97		0.76	72.60		0.54
58	154.42	72.5	2.12	117.87	64.0	1.43	97.32		1.03	83.89		0.77	74.31		0.55
59	157.98	73.1	2.11	120.59	64.8	1.43	99.57		1.04	85.82		0.78	76.02		0.57
60	161.56	73.7	2.11	123.32	65.6	1.43	101.82		1.04	87.77		0.79	77.74		0.58

BASELINE CONTACT AREA
 MINIMUM % AREA OF RELIEF (COMPARED WITH UNINTERRUPTED BEARING SURFACE)
 MINIMUM % AREA OF RELIEF (COMPARED WITH TOTAL ARTICULAR SURFACE)
 MAXIMUM % AREA OF RELIEF (COMPARED WITH UNINTERRUPTED BEARING SURFACE)
 MAXIMUM % AREA OF RELIEF (COMPARED WITH TOTAL ARTICULAR SURFACE)

Fig. 20

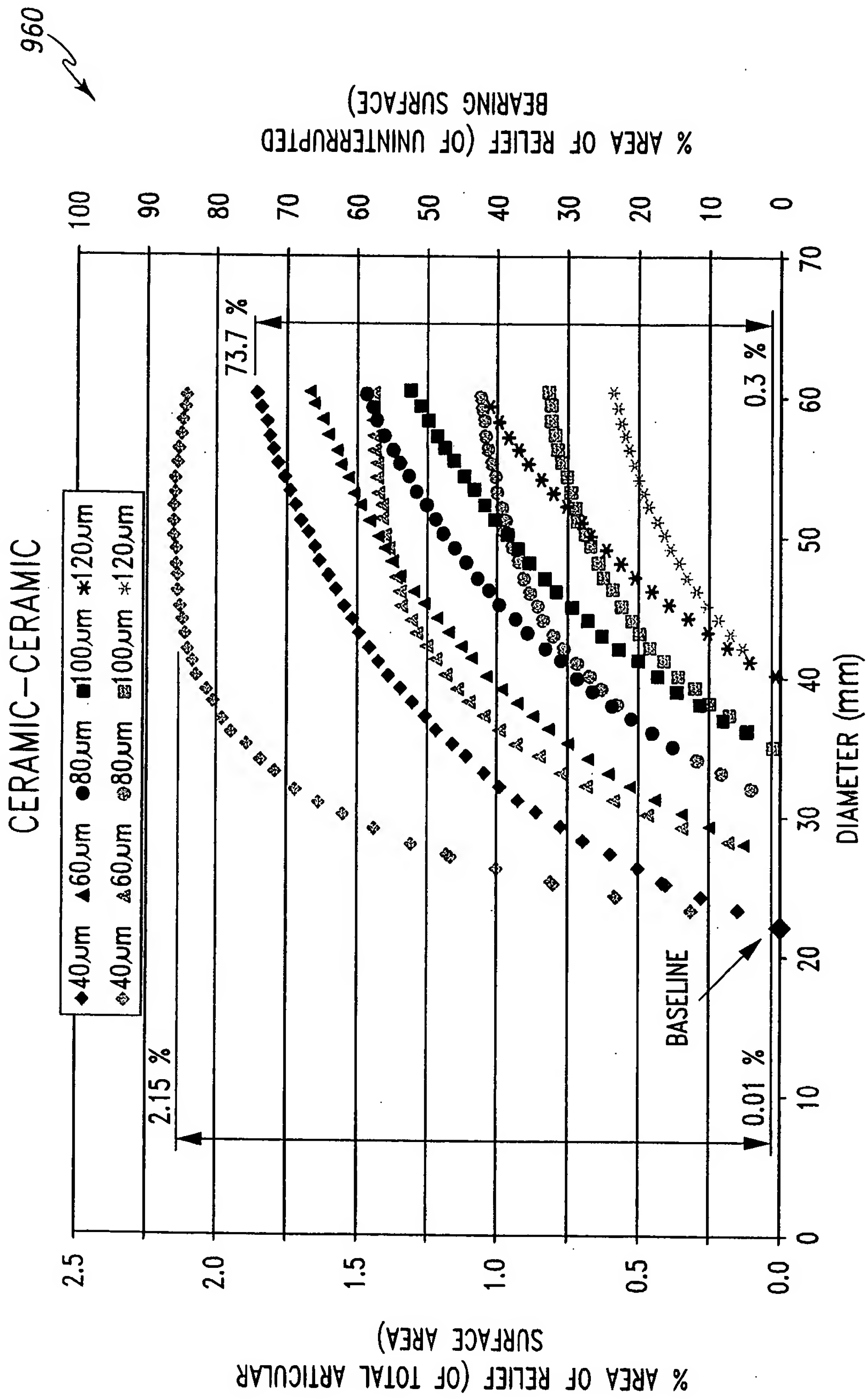


Fig. 21

COBALT CHROMIUM ON POLYETHYLENE

Φ INDUWAL (mm)	300 μ m			400 μ m			500 μ m			600 μ m		
	AREA (mm ²)	% AREA OF RELIEF (OF UNINTERRUPTED CONTACT AREA)	% AREA OF RELIEF (OF TOTAL ARTICULAR SURFACE AREA)	AREA (mm ²)	% AREA OF RELIEF (OF UNINTERRUPTED CONTACT AREA)	% AREA OF RELIEF (OF TOTAL ARTICULAR SURFACE AREA)	AREA (mm ²)	% AREA OF RELIEF (OF UNINTERRUPTED CONTACT AREA)	% AREA OF RELIEF (OF TOTAL ARTICULAR SURFACE AREA)	AREA (mm ²)	% AREA OF RELIEF (OF UNINTERRUPTED CONTACT AREA)	% AREA OF RELIEF (OF TOTAL ARTICULAR SURFACE AREA)
22	504.69	36.4	24.19	417.85	23.2	12.77	361.17	11.2	5.31	320.78	0.0	0.00
23	535.29	40.1	25.82	443.14	27.6	14.73	382.97	16.2	7.49	340.10	5.7	2.33
24	566.34	43.4	27.14	468.79	31.6	16.36	405.09	20.8	9.32	359.71	10.8	4.30
25	597.83	46.3	28.22	494.80	35.2	17.73	427.52	25.0	10.87	379.58	15.5	5.99
26	629.73	49.1	29.10	521.15	38.4	18.87	450.25	28.8	12.19	399.72	19.7	7.43
27	662.04	51.5	29.80	547.84	41.4	19.83	473.26	32.2	13.32	420.11	23.6	8.67
28	694.76	53.8	30.37	574.86	44.2	20.63	496.56	35.4	14.27	440.76	27.2	9.74
29	727.86	55.9	30.82	602.20	46.7	21.30	520.14	38.3	15.09	461.65	30.5	10.66
30	761.34	57.9	31.16	629.85	49.1	21.86	543.98	41.0	15.79	482.77	33.6	11.46
31	795.19	59.7	31.43	657.82	51.2	22.33	568.09	43.5	16.38	504.14	36.4	12.15
32	829.41	61.3	31.62	686.08	53.2	22.71	592.46	45.9	16.89	525.73	39.0	12.74
33	863.99	62.9	31.76	714.63	55.1	23.03	617.08	48.0	17.32	547.54	41.4	13.26
34	898.91	64.3	31.84	743.48	56.9	23.28	641.95	50.0	17.69	569.58	43.7	13.70
35	934.18	65.7	31.88	772.60	58.5	23.48	667.06	51.9	18.00	591.83	45.8	14.09
36	969.78	66.9	31.88	802.01	60.0	23.64	692.42	53.7	18.26	614.29	47.8	14.42
37	1005.72	68.1	31.85	831.68	61.4	23.76	718.00	55.3	18.47	636.95	49.6	14.70
38	1041.97	69.2	31.80	861.63	62.8	23.85	743.82	56.9	18.65	659.83	51.4	14.95
39	1078.55	70.3	31.72	891.83	64.0	23.90	769.86	58.3	18.80	682.90	53.0	15.16
40	1115.44	71.2	31.62	922.30	65.2	23.93	796.12	59.7	18.91	706.17	54.6	15.33
41	1152.63	72.2	31.50	953.01	66.3	23.94	822.60	61.0	19.01	729.63	56.0	15.48
42	1190.13	73.0	31.38	983.98	67.4	23.94	849.30	62.2	19.07	753.28	57.4	15.61
43	1227.93	73.9	31.23	1015.19	68.4	23.91	876.21	63.4	19.12	777.12	58.7	15.71
44	1266.02	74.7	31.08	1046.65	69.4	23.87	903.33	64.5	19.16	801.14	60.0	15.80
45	1304.40	75.4	30.92	1078.34	70.3	23.82	930.65	65.5	19.17	825.34	61.1	15.86
46	1343.06	76.1	30.76	1110.27	71.1	23.75	958.17	66.5	19.18	849.72	62.2	15.91
47	1382.00	76.8	30.58	1142.42	71.9	23.68	985.90	67.5	19.17	874.28	62.3	15.95
48	1421.22	77.4	30.41	1174.81	72.7	23.60	1013.81	68.4	19.15	899.02	64.3	15.98
49	1460.71	78.0	30.23	1207.42	73.4	23.51	1041.93	69.2	19.12	923.92	65.3	15.99
50	1500.47	78.6	30.04	1240.25	74.1	23.41	1070.23	70.0	19.09	948.99	66.2	16.00
51	1540.50	79.2	29.85	1273.30	74.8	23.31	1098.72	70.8	19.04	974.23	67.1	15.99
52	1580.78	79.7	29.67	1306.57	75.4	23.21	1127.40	71.5	18.99	999.64	67.9	15.98
53	1621.33	80.2	29.48	1340.05	76.1	23.10	1156.26	72.3	18.94	1025.20	68.7	15.97
54	1662.13	80.7	29.29	1373.74	76.6	22.99	1185.30	72.9	18.87	1050.93	69.5	15.94
55	1703.18	81.2	29.09	1407.64	77.2	22.87	1214.53	73.6	18.81	1076.81	70.2	15.91
56	1744.48	81.6	28.90	1441.74	77.8	22.76	1243.92	74.2	18.74	1102.86	70.9	15.88
57	1786.03	82.0	28.71	1476.05	78.3	22.64	1273.50	74.8	18.67	1129.05	71.6	15.84
58	1827.82	82.5	28.52	1510.56	78.8	22.52	1303.24	75.4	18.59	1155.40	72.2	15.80
59	1869.85	82.8	28.33	1545.26	79.2	22.39	1333.16	75.9	18.52	1181.90	72.9	15.75
60	1912.12	83.2	28.14	1580.16	79.7	22.27	1363.25	76.5	18.44	1208.55	73.5	15.70

BASELINE CONTACT AREA
 MINIMUM % AREA OF RELIEF (COMPARED WITH UNINTERRUPTED BEARING SURFACE)
 MINIMUM % AREA OF RELIEF (COMPARED WITH TOTAL ARTICULAR SURFACE)
 MAXIMUM % AREA OF RELIEF (COMPARED WITH UNINTERRUPTED BEARING SURFACE)
 MAXIMUM % AREA OF RELIEF (COMPARED WITH TOTAL ARTICULAR SURFACE)

Fig. 22

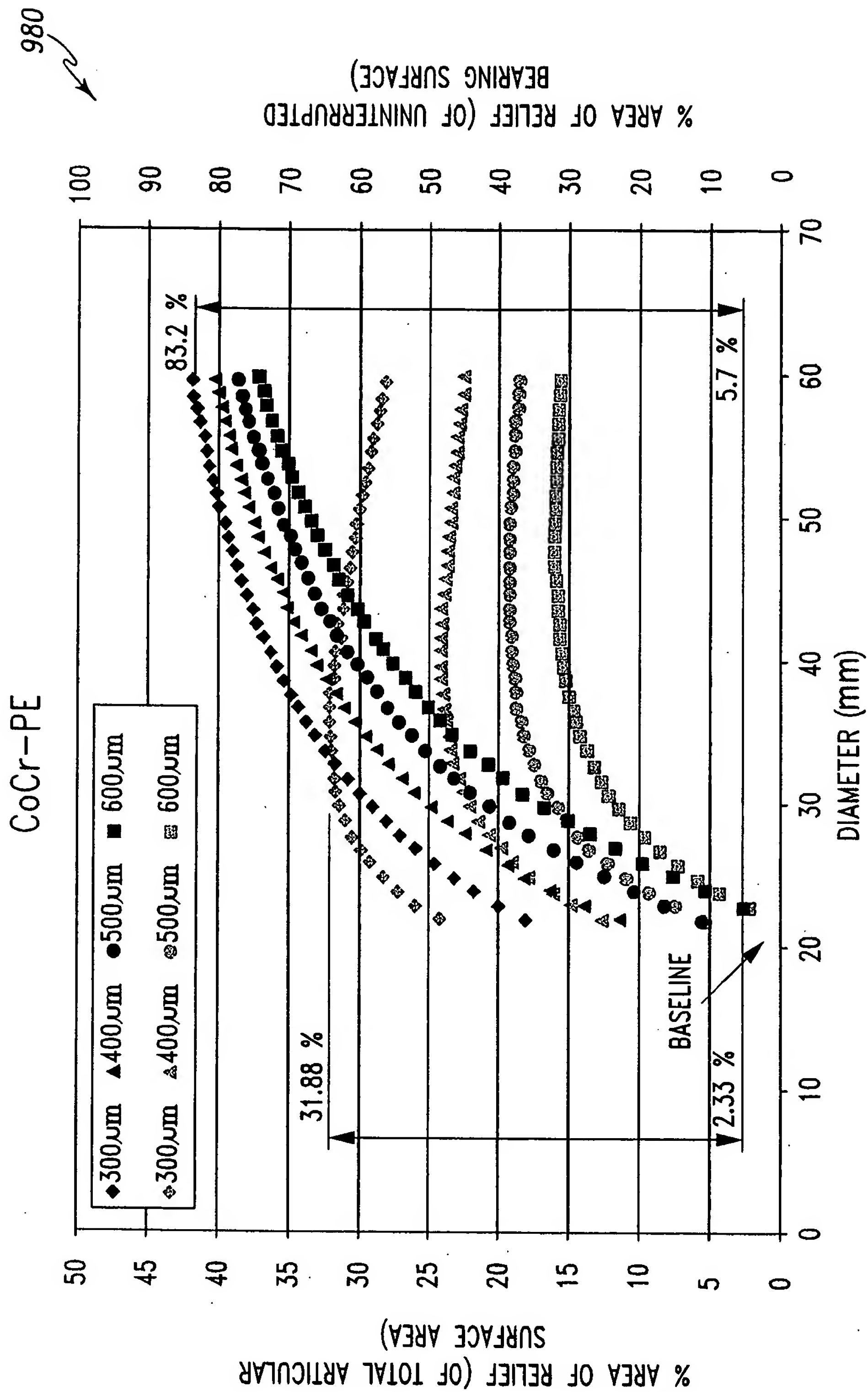


Fig. 23